

## FLORIDA DEPARTMENT OF EDUCATION

### INSTRUCTIONAL TECHNOLOGY STATE LEVEL ACTIVITIES 1987-88

#### INTRODUCTION

Commissioner Castor announced in May, 1987, a major initiative for Florida's schools to employ instructional technology equitably in every area of education where it will enhance the efficiency and effectiveness of the learning process.

In August, 1987, the Commissioner appointed a Department of Education (DOE) Instructional Technology Task Force to provide leadership and coordination of state level activities. This paper is to serve as a summary of activities for dissemination of information by all DOE staff. Regular up-dates will be made by the Task Force.

#### CURRENT ACTIVITIES IN DEPARTMENT OF EDUCATION

##### Division of Human Resource Development

##### Bureau of Teacher Education

The Inservice Staff Development Section of the Bureau of Teacher Education has as one of its responsibilities the Summer Inservice Institute Program. During each of the summers of 1985, 1986 and 1987, 3,000 teachers have received 30 hours of inservice training in computer education through the Summer Inservice Institutes. The training areas vary by district and by sophistication of the participants. Examples of training areas are: computer literacy, computer assisted instruction, software exploration, specialized software usage and computer programming. Similar training will be offered through the institutes in 1988.

Additional opportunities exist for participating during the school year in the regular inservice teacher education program. All school districts offer inservice components or have access to training in instructional technology related activities.

The Preservice Section of the Bureau of Teacher Education has as one of its responsibilities the approval of teacher education programs at various colleges and universities. To date, no programs in computer education have been approved. There are, however, many approved programs which interface with the use of computers. Particularly, approved programs such as mathematics, technical education and business education may use computer assisted instruction as a part of the instructional design. Plans are being made to amend the program approval Rule 6A-5.061, FAC, to include generic competency on computer literacy.

DOE staff are encouraged to submit additional items for the regular updates of this description of state level activities in instructional technology. Send material to any member of Task Force. (See attached membership list.)

Forty computer related courses are available at 11 colleges and universities in schools of education.

#### **Bureau of Certification**

The Commissioner has recommended that Computer Science become an area for state teacher certification.

#### **Division of Public Schools**

##### **Bureau of Compensatory Education (BCE)**

The Bureau of Compensatory Education administers supplementary programs throughout the State in Chapter 1 Basic, Chapter 1 Migrant, Dropout Prevention and State Compensatory Education. The required supplementary nature of these programs has led to innovative uses of technology for instruction in many districts. In addition to instructional television, cassette/filmstrip projectors and other media based technology, the majority of Florida's school districts have used part of these funds to purchase microcomputers for both instructional and management purposes. Applications range from computer labs with complete diagnostic/prescriptive learning systems to a single computer in the back of the classroom used for reward and motivation. Some districts are using computers in tutorial programs to provide after school and Saturday instruction for students needing additional instructional hours to meet graduation requirements.

To satisfy requirements to provide Chapter 1 services to eligible children attending religiously affiliated private schools, two unique approaches have been implemented in Florida. The "Take Home Computer Program" allows a child and parent to receive training and then take a computer home to practice lessons and skills. A second approach allows a student to interact with a non-programmable computer at the private school site. The computer is linked to a master computer at the district school office, where the instruction is supervised by district staff.

##### **Bureau of Curriculum Services (BCS)**

The State Board of Education adopted Minimum Student Performance Standards for Computer Literacy and Science on November 5, 1985. These standards became part of each district's pupil progression plan effective July 1, 1986, for instructional purposes. Beginning with the 1987-88 school year, certification of mastery of the applicable grade level standards are required (1) before promotion is granted at grade 3, and (2) as prescribed in each district's pupil progression plan at grades 5, 8 and 11 as specified in Sections 229.565(2), 230.2312(4), and 232.245, F.S. Districts are responsible for identifying and implementing policies and procedures to be used in verifying student mastery of the new standards.

The Program Assistance (PA) Section is providing support to school districts for the implementation of Minimum Student Performance Standards in Computer Literacy including assisting in the development of district curriculum guides.

The PA staff is coordinating the development of teacher certification for computer science through working with professional organizations, universities and the Bureau of Certification. Other activities include:

- Providing awareness through technical assistance on the use of computers for vocabulary development and enhancing writing skills through word processing and such programs as "Electric Poet." School papers and plays are produced on computers.
- Providing awareness through technical assistance on the use of videotaping to replay marching, show, choir, and musical theater productions, computer-assisted instruction, computers to help monitor inventories, music libraries, chart marching shows, assist music composition, using electronic keyboards. Several courses in electronic music are included in the Course Code Directory and taught in many districts.
- Providing awareness of the the Center for Music Research at FSU, which is considered the leading national laboratory in the latest techniques, innovative equipment, and research in computer assisted music instruction.
- Reviewing computer software relating to U.S. Constitution studies for use in commemoration activities of the Bicentennial of the U.S. Constitution. Providing awareness through technical assistance on the use of available software in social studies.
- Providing awareness through technical assistance on the the use of computer-generated art and graphics.
- Providing awareness through technical assistance on the the use of software for foreign language introduction including drill and practice and satellite transmission of foreign language courses via satellite television.
- Conducting workshops throughout the state on the use and integration of selected computer software programs in the teaching of science courses, the Science Minimum Student Performance Standards and Standards of Excellence.
- Coordinating the statewide implementation of the "Shape Up" program. The program is sponsored by the American Gourmet Corporation and other cooperations, and is a fitness instruction program appropriate for integration into the personal fitness course required for high school graduation. It uses computer software to assess each student's fitness level and to deliver instruction. There is a possibility that corporate sponsorship could be obtained to place a computer in every high school physical education department. These computers could then be linked by modems to form a statewide electronic communications network.
- The Florida Catalog of Science Objectives and Associated Criterion Test Items K-12 has been placed on computer and made available to district personnel through FIRN.
- The School Library Media Services office is disseminating information to school district media personnel on effective application of instructional technology in the school library media centers including both on-line and CD-ROM data bases. Library networking potential for provision of expanded resources for student use is being explored also.

The Instructional Television and Radio Section (ITV) conducts the following services and activities:

- Acquire, through purchase or lease, the rights to reproduce and distribute ITV programming to Florida's public, tax-supported, educational institutions at the K-12 and community college levels.
- Reproduce on blank tape provided by the district or college the materials in the ITV&R collection.
- Provide copies of recent program acquisitions on a short term loan basis.
- Provide funds, on matching basis, to acquire or expand the capability of schools and colleges to distribute programming provided by this office.
- Provide technical assistance to colleges and districts in the development of plans, the identification of equipment and the final checkout of ITV distributions systems.

ITV staff attends national and regional meetings at which new programming is previewed to identify materials for potential acquisition.

A formal training program, mandated by the Legislature, is established for members of state and district instructional materials councils for the 1987-88 adoption. The program includes the evaluation and selection of computer course ware.

#### **Bureau of Education for Exceptional Students (BEES)**

"The use of instructional technology to facilitate the learning process for exceptional students, and to enhance its efficiency and effectiveness" continues as a major initiative for the Bureau of Education for Exceptional Students.

Activities to support this initiative during 1987-88 include:

- Coordinate the development of a long-range plan for the integration of technology into exceptional student education programs, including a statewide survey to determine the impact of, and directions for, technology applications.
- Assist districts in providing the interface between instructional technology and curriculum.
- Provide technical assistance information to districts on financial resources for expansion of education technology in exceptional education classrooms.
- Manage and coordinate instructional technology services components of FDLRS (pursuant to 1987 Amendments to Section 229.832, F.S., and related appropriation); and manage other projects.
- Coordinate product development and dissemination, regional training, and demonstration sites for the integration and effective use of instructional technology in exceptional student education classrooms, with emphasis on correlation of software with curriculum frameworks, and tool applications (data bases, word processing, spreadsheets, graphics).

- Sponsor/coordinate exceptional student education/instructional technology program strands for conferences.
- Coordinate ongoing cooperative planning for the development and establishment of a statewide assistive/adaptive devices system for exceptional student education.

#### Office of Educational Technology (OET)

The Educational Technology Section provides the following services:

- Monitors DOE grants to three instructional computing centers. The Florida Center for Instructional Computing at the University of South Florida focuses on software evaluations and telecommunications; the University of Central Florida Center provides information on computer literacy and correlation of instructional software to student minimum performance standards in math, science and computer literacy; and the Broward County Staff Development Center focuses on staff development and training.
- Provides management, planning and budgeting support for the Florida Information Resource Network (FIRN), a multi-vendor electronic network designed to provide a data communications link to every public education institution and school in the state. The network includes access to a science test item database with thousands of sample questions and objectives, and enables universities, colleges and schools to access software packages at other campuses. It also provides electronic mail and bulletin board service, and access to "@MICRO," a database of more than 1,000 software evaluations.
- Maintains a people network of instructional computer contacts at every public school district, community college and university in the state. Information pertinent to instructional computing is regularly disseminated to these contacts, who in turn pass it along to other educators.
- Organizes and sponsors the annual Florida Instructional Computing Conference, now in its eighth year. The conference attracts some 2,500 educators and 500-600 vendors, and features more than 150 concurrent sessions over a three-day period.
- Offers associate membership to districts and schools in the Minnesota Educational Computing Corporation, through which instructional software can be purchased at reduced prices.
- Assists the Department of General Services in the development of a statewide microcomputer contract, enabling districts and schools to purchase microcomputer systems at discounted prices from approved vendors.
- Offers technical assistance to districts and schools with computer needs, bid specifications, management information systems and data communications.
- Administers the Florida Model Schools Consortia.
- Monitors instructional technology activities in other states.
- Monitors new developments in the computer industry and related fields.
- Promotes innovative technological pilot projects within Florida's educational community.

## **SPECIAL FUNDED PROJECTS**

### **Division of Public Schools**

Project CHILD - FSU Center for Instructional Development and Services. The project will develop models and teacher manuals for integrating technology into the classroom. Volusia County is pilot site.

\$270,000

Project SAT 12000 - Brevard Community College - To provide computer assisted instruction for minority students to score higher on the SAT and to produce a manual describing procedures.

\$100,000

Instructional Strategies Enhancement - New appropriation passed by the 1987 Legislature to be used to purchase computer instructional software programs to enhance student learning. All computer instructional software purchased shall be acquired at the lowest price possible. Purchase agreements may include a statewide contract from which each district may purchase directly from the vendor, reproduction rights for the state system of public schools, volume discount prices, etc.

\$630,000

### **Bureau of Compensatory Education (BCE)**

The 1987 Legislature authorized districts to expend up to \$18 per pupil in State Compensatory Education (SCE) without amending the SCE Plan for the purpose of implementing instructional technology programs designed to improve classroom efficiency and effectiveness in teaching.

### **Bureau of Curriculum Services (BCS)**

#### **The Education for Economic Security Act, Title II**

Seventy percent of the Title II funds received by the State of Florida for elementary and secondary education is made available to local education agencies for the expansion and improvement of inservice training and retraining of teachers and other appropriate school personnel in the fields of mathematics, science, computer learning and foreign languages.

Districts in the State of Florida have the opportunity to use these funds for instructional technology and related activities. Funds received by a district may be expended on the purchase of computers and computer related instructional equipment; however, it must be determined that the purchase of the equipment is not the primary educational objective, and that the training objective relates to math or science inservice training.

If a district chooses to use Title II funds in an area other than math or science inservice training, then it may spend up to 30 percent of the funds it receives on the purchase of computers and related equipment.

Through state-level projects Title II funds are providing for the development of modules in artificial intelligence for use in computer technology courses at the secondary level. The product will include goals, objectives, lesson plans, activity sheets, and references. This project will be completed during 1987-88.

Also Title II funds are providing for the development of a package of materials to help teachers implement the Computer Literacy Minimum Student Performance Standards. The package includes a teacher's guide, lesson plans, black-line masters, and a teacher training video tape.

#### **Bureau of Education for Exceptional Students (BEES)**

##### **Florida Diagnostic and Learning Resources System (FDLRS)**

The Florida Diagnostic and Learning Resources System (FDLRS) operates through 18 Associate Centers to provide diagnostic and instructional support services to district exceptional student education programs statewide. Consistent with Sections 229.832, 229.834, and 229.8341, F.S., functions of the centers include student identification and evaluation, inservice training, media/materials, and information/consultation. The 1987 Legislature modified the FDLRS' functions to include responsibility for assisting in "the delivery, modification, and integration of instructional technology, including microcomputer applications and adaptive and assistive devices, appropriate to the unique needs of exceptional students." Each center provides the following services: assessment of program needs; dissemination of relevant information and materials resources; establishment of microcomputer mini-labs for demonstration, training, and software; inservice training of teachers; provision of direct, personal, technical assistance and consultation to classroom teachers; and assistance in the evaluation of the effectiveness of technology applications in exceptional student program.

##### **Instructional Technology Training Resource Unit (FDLRS/TECH) (Brevard)**

This FDLRS Specialized Center provides instructional technology training resources to exceptional student education programs statewide, through support to the FDLRS Associate Center instructional technology components. The support functions include maintenance of an instructional technology clearinghouse to provide state-of-the-art information and resources, facilitation of FDLRS network training activities, assistance to personnel in selecting or developing training materials, technical assistance to Centers in the implementation of classroom technology integration activities, and cooperation with other state and national technology projects.

##### **Instructional Technology Technical Resource Unit (Sarasota)**

This EHA, Part B, Special Project provides research, technical consultation to district and FDLRS personnel, custom-made adaptive or assistive devices, and public-domain software programs appropriate to the needs of low-incidence and multiply handicapped students, enabling them to use instructional applications of microcomputer technology in the classroom. This project may also provide evaluations of exceptional students when such evaluations are necessary to enhance the technical consultation, training, or device design functions of the project.

##### **Computer Resource Center (FSDB)**

The Florida School for the Deaf and the Blind (FSDB) Computer Resource Center provides assistance to programs throughout the state in the effective use of computer-assisted instruction with hearing impaired and visually impaired students. Services include

software screening, modification, and development as well as training and technical assistance.

#### Communication Systems Evaluation Center (CSEC) (Orange)

This FDLRS Specialized Center evaluates, through an interdisciplinary team, the communication needs of students ages 3 through 21 who are non-vocal or who have unintelligible speech, and recommends appropriate augmentative communications systems and devices. The Center also provides outreach, inservice training, and follow-up services relating to the communications needs of these students.

#### Florida Instructional Materials Center (FIMC) (Hillsborough)

This FDLRS Specialized Center serves as the centralized collection of specialized instructional materials for visually impaired students through grade twelve, and as a resource center providing coordination and training in the selection and use of materials and equipment. As part of these functions, the Center has piloted and sponsored the implementation of technology applications such as automated braille production systems used by teachers to make instructional materials for visually impaired students, and paperless braille systems.

#### Educational Television and Captioning Center of the Hearing Impaired (FSDB)

This FDLRS Specialized Center identifies, evaluates, captions, dubs, and loans instructional videotapes for use with hearing impaired students throughout the state.

### INTERAGENCY AND MULTI-STATE ACTIVITIES

#### Division of Public Schools

##### Bureau of Compensatory Education (BCE)

Direct linkage between a school district and the Migrant Student Record Transfer System in Little Rock, Arkansas allows for the immediate exchange of educational and health data for any migrant child enrolling in school. Four districts have received approval to pilot new and innovative approaches to accomplish this activity.

Technology in Migrant Education (T.I.M.E.) was established in August 1987, as a national computer user's group for the exchange of ideas, concepts and programs to enhance the education of Migrant children. Florida sent six educators from both the State and district levels to participate.

##### Bureau of Curriculum Services (BCS)

Florida participates in the IBM/National Science Foundation Grant which provided for the establishment of a national network for the science consultants in every state department of education.

The University of Florida, through an NSF grant, has placed all federally-funded science programs on video disc and computer so that these programs are available to curriculum developers throughout the country.

Florida is a participant in a consortium of states through the Agency for Instructional Technology to produce several video series for use in Florida classrooms. This provides up-to-date instructional materials in Mathematics, Science, and Social Studies.

School library media staff serve as members of the Florida Library Network Advisory Committee, Policy Board, State Database and Interlibrary Loan Committees. The Advisory Committee and Policy Board is coordinated by the State Library of Florida, Department of State, and includes representation of all types of libraries. The ultimate goal is the provision of increased access to resources and information for all Florida citizens to fulfill personal, educational and business needs.

The ITV office provides videotape, audiotape and microcomputer diskette dubbing services for other offices in the Department and for other State agencies.

ITV office provides consultive assistance and conducts product testing for the Department of General Services for the purpose of developing bid specifications for acquisition of videotape, microcomputer diskettes and selected items of technical equipment.

ITV office cooperates with the Office of Education Technology to provide master copies of MECC microcomputer software for associate members in the State.

ITV staff participates in multi-state consortia development projects for production of instructional television programming and support materials.

#### Office of Educational Technology (OET)

OET participates in SEED (Software Evaluation Exchange Dissemination), a multi-state regional software evaluation effort.